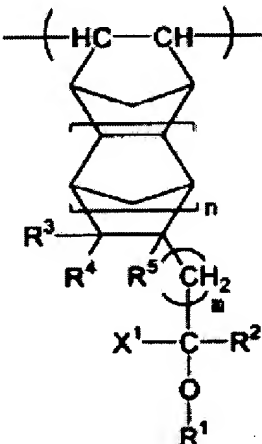
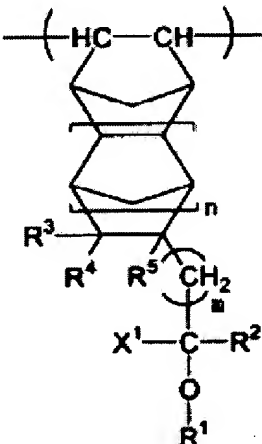
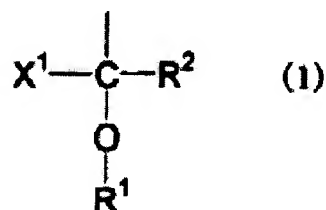


1

a


$$\begin{array}{c} \text{---(HC---CH)---} \\ | \\ \text{Cyclohexene ring system} \\ | \\ \text{R}^3 \quad \text{R}^4 \quad \text{R}^5 \quad \text{CH}_2 \\ | \\ \text{X}^1\text{---C---R}^2 \\ | \\ \text{O} \\ | \\ \text{R}^1 \end{array}$$

$$\begin{array}{c} \text{---(HC---CH)---} \\ | \\ \text{Cyclohexene ring system} \\ | \\ \text{R}^3 \quad \text{R}^4 \quad \text{R}^5 \quad \text{CH}_2 \\ | \\ \text{X}^1\text{---C---R}^2 \\ | \\ \text{O} \\ | \\ \text{R}^1 \end{array}$$

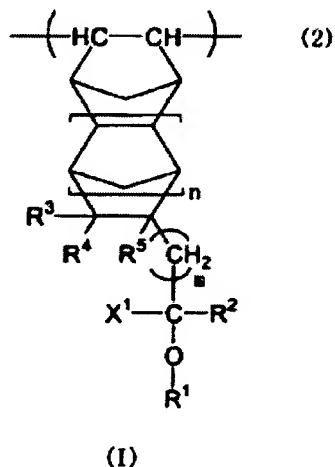
a



wherein R¹ represents a hydrogen atom, a monovalent acid-labile group, an alkyl group having 1-6 carbon atoms which does not have an acid-labile group, or an alkylcarbonyl group having 2-7 carbon atoms which does not have an acid-labile group, X¹ represents a linear or branched fluorinated alkyl group having 1-4 carbon atoms, and R² represents a hydrogen atom or a linear or branched alkyl group having 1-10 carbon atoms.

21. The radiation-sensitive resin composition according to Claim 20, wherein R² is hydrogen or a methyl group.

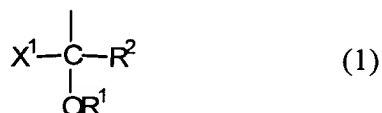
22. The radiation-sensitive resin composition according to Claim 20, wherein the acid-labile group-containing resin comprises a recurring unit (I) represented by the following formula (2):



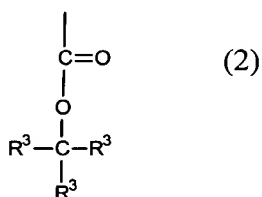
wherein each of R^3 , R^4 , and R^5 individually represent a hydrogen atom or a linear or branched alkyl group having 1 - 4 carbon atoms, a monovalent oxygen-containing polar group, or a monovalent nitrogen-containing polar group, n is an integer of 0 - 2, and m is an integer of 0 - 3.

23. A radiation-sensitive resin composition comprising:

(A) an acid-labile group-containing resin containing a recurring unit of the following formula (1),

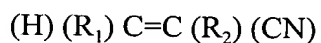


wherein R^1 represents a hydrogen atom or a monovalent acid-labile group, X^1 represents a linear or branched fluoroalkyl group having 1-4 carbon atoms, and R^2 represents a hydrogen atom, a linear or branched alkyl group having 1-10 carbon atoms, or a linear or branched fluoroalkyl group having 1-10 carbon atoms, and a recurring unit represented by the following formula (2),



wherein any two of the R^3 groups form, in combination and together with the carbon atom with which these groups bond, a divalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof with the remaining R^3 group being a linear or branched alkyl group having 1-4 carbon atoms, a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof,

the resin not containing a recurring unit derived from at least one ethylenically unsaturated group having the structure,

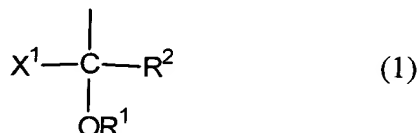


wherein R_1 is a hydrogen atom or a CN group, R_2 is an alkyl group having 1-8 carbon atoms, a hydrogen atom, or a $COOR_3$ group wherein R_3 is an alkyl group having 1-8 carbon atoms or hydrogen atom, and

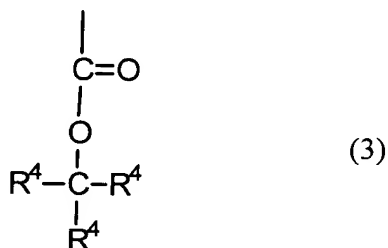
(B) a photoacid generator.

24. A radiation-sensitive resin composition comprising:

(A) an acid-labile group-containing resin containing a recurring unit of the following formula (1),

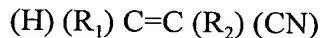


wherein R^1 represents a hydrogen atom or a monovalent acid-labile group, X^1 represents a linear or branched fluoroalkyl group having 1-4 carbon atoms, and R^2 represents a hydrogen atom, a linear or branched alkyl group having 1-10 carbon atoms, or a linear or branched fluoroalkyl group having 1-10 carbon atoms, and
a recurring unit represented by the following formula (3),



wherein at least one R^4 group in the formula (3) is a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof and the remaining R^4 groups are individually a linear or branched alkyl group having 1-4 carbon atoms,

the resin not containing a recurring unit derived from at least one ethylenically unsaturated group having the structure,

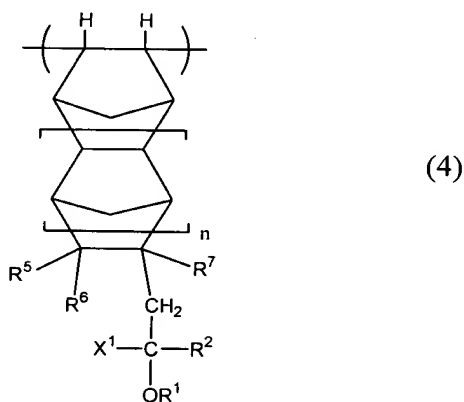


wherein R_1 is a hydrogen atom or CN group, R_2 is an alkyl group having 1-8 carbon atoms, a hydrogen atom, or a $COOR_3$ group wherein R_3 is an alkyl group having 1-8 carbon atoms or hydrogen atom, and

(B) a photoacid generator.

25. A radiation-sensitive resin composition comprising

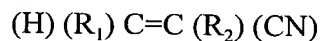
(A) an acid-labile group-containing resin having a recurring unit of the following formula (4),



wherein R^1 represents a hydrogen atom or a monovalent acid-labile group, X^1 represents a linear or branched fluoroalkyl group having 1-4 carbon atoms, and R^2 represents a hydrogen atom, a linear or branched alkyl group having 1-10 carbon atoms, or a linear or branched fluorinated alkyl group having 1-10 carbon atoms, and R^5 , R^6 , and R^7 individually represent a hydrogen atom, a

linear or branched alkyl group having 1-4 carbon atoms, a monovalent oxygen-containing polar group, or a monovalent nitrogen-containing polar group, and n is an integer of 0-2,

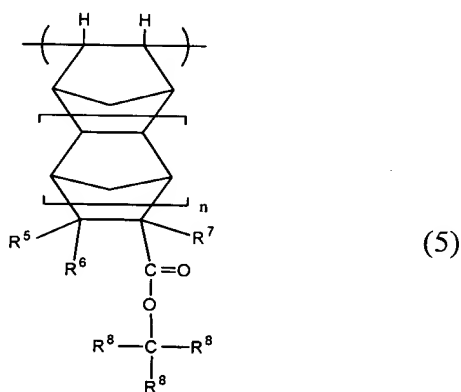
the resin not containing a recurring unit derived from at least one ethylenically unsaturated group having the structure,



wherein R_1 is a hydrogen atom or a CN group, R_2 is an alkyl group having 1-8 carbon atoms, a hydrogen atom, or a $COOR_3$ group wherein R_3 is an alkyl group having 1-8 carbon atoms or hydrogen atom, and

(B) a photoacid generator.

26. The radiation-sensitive resin composition according to Claim 25, comprising (A) an acid-labile group-containing resin having the recurring unit of the formula (4) and a recurring unit of the following formula (5),



wherein R^5 , R^6 and R^7 individually represent a hydrogen atom, a linear or branched alkyl group having 1-4 carbon atoms, a monovalent oxygen-containing polar group, or a monovalent nitrogen-containing polar group, n is an integer of 0-2, and wherein each R^8 individually represents a linear or branched alkyl group having 1-4 carbon atoms or a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof, or any two of the R^8 groups form, in combination and together with the carbon atom with which these groups bond, a divalent

alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof with the remaining R^8 group being a linear or branched alkyl group having 1-4 carbon atoms or a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof,

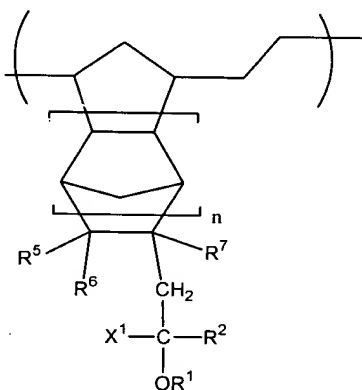
wherein all recurring units forming the resin are derived from a norbornene derivative or a tetracyclododecene derivative, and

(B) a photoacid generator.

27. A radiation-sensitive resin composition comprising,

(A) an acid-labile group-containing resin having a recurring unit of the following formula

(6),



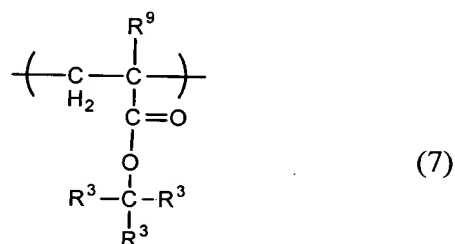
(6)

wherein R^1 represents a hydrogen atom or a monovalent acid-labile group, X^1 represents a linear or branched fluoroalkyl group having 1-4 carbon atoms, R^2 represents a hydrogen atom, a linear or branched alkyl group having 1-10 carbon atoms, or a linear or branched fluorinated alkyl group having 1-10 carbon atoms, and R^5 , R^6 , and R^7 individually represent a hydrogen atom, a linear or branched alkyl group having 1-4 carbon atoms, a monovalent oxygen-containing polar group, or a monovalent nitrogen-containing polar group, and n is an integer of 0-2,

the resin being synthesized by metallocene polymerization and a hydrogenation reaction, and

(B) a photoacid generator.

28. The radiation-sensitive resin composition according to Claim 23, comprising (A) an acid-labile group-containing resin having a recurring unit of the formula (1) and a recurring of the following formula (7),

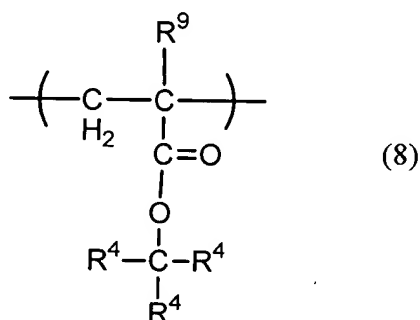


a) wherein any two of R³ groups form, in combination and together with the carbon atom with which these groups bond, a divalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof, with the remaining R³ group being a linear or branched alkyl group having 1-4 carbon atoms or a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof and R⁹ represents a hydrogen atom or methyl group, and

(B) a photoacid generator.

29. The radiation-sensitive resin composition according to Claim 23, comprising

(A) an acid-labile group-containing resin having a recurring unit of the formula (1) and a recurring unit of the following formula (8),



wherein at least one R⁴ group is a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof and each of the remaining R⁴ groups individually represents a linear